



AUSTIN ENERGY GREEN BUILDING MULTIFAMILY RATING 2009

PROJECT:

#126

Point Requirements for Star Ratings		Star Rating	
☆	Basic Requirements	Sub-Totals: Basic Reqs	0
☆☆	29-35 points		Not Achieved
☆☆☆	36-42 points		
☆☆☆☆	43-56 points	Site	0
☆☆☆☆☆	57 or more points	Energy	0
		Water	0
		IEQ	0
		Materials	0
		Innovation	0
		Total Points:	0

Project Information Summary	Project Team Summary
Physical Address:	AEGB Representatives:
Primary Use of Building(s):	
Mandatory Austin Energy Green Building Rating:	
Austin Energy Green Building Star Rating Goal:	Building Owner/Developer:
LEED Certification Goal:	(000) 000-0000
Description:	Architect:
	(000) 000-0000
Type of Construction:	Mechanical Engineer:
# of Floors:	(000) 000-0000
Sq. Ft. (gross):	
Sq. Ft. (net):	Structural Engineer:
	(000) 000-0000
Construction Scheduled Start:	Electrical Engineer:
Construction Scheduled Finish:	(000) 000-0000
Demand and Energy Savings - calculated:	General Contractor:
kW	(000) 000-0000
kWH/year	
CCF/year	Commissioning Authority:
	(000) 000-0000
Water and Wastewater Savings - Calculated:	Civil Engineer:
Building Water 0,000 Gallons or 0% reduction over Baseline	(000) 000-0000
Irrigation Water 0,000 Gallons in July or reduction over Baseline	
Construction Waste Management 0 tons or 0% diverted from landfill	Professional Title:
	(000) 000-0000
	Professional Title:
	(000) 000-0000



**AUSTIN ENERGY GREEN BUILDING
COMMERCIAL
PROJECT:**

126

Point Requirements for Star Ratings	Star Rating
☆ Basic Requirements ☆☆ 30-36 points ☆☆☆ 37-43 points ☆☆☆☆ 44-58 points ☆☆☆☆☆ 59 or more points	0 Sub-Totals: Basic Reqs Not Achieved Team 0 Site 0 Energy 0 Water 0 IEQ 0 Materials 0 Education 0 Innovation 0 Total Points: 0

Project Information Summary	Project Team Summary
Physical Address: Primary Use of Building(s): Mandatory Austin Energy Green Building Rating: Austin Energy Green Building Star Rating Goal: LEED Certification Goal: Description: Type of Construction: # of Floors: Sq. Ft. (gross): Sq. Ft. (net): Construction Scheduled Start: Construction Scheduled Finish: Demand and Energy Savings (calculated): kW for a % demand reduction kWh/year for a % annual electric savings CCF/year for a % annual natural gas savings 0,000 x 10 ⁶ Btu/year for a % total annual energy savings Water and Wastewater Savings (calculated): Building Water 0,000 Gallons or 0% reduction over Baseline Irrigation Water 0,000 Gallons In July or 0% reduction over Baseline Construction Waste Management: tons or 0% diverted from landfill	AEGB Representatives: Building Owner/Developer: (000) 000-0000 Architect: (000) 000-0000 Mechanical Engineer: (000) 000-0000 Structural Engineer: (000) 000-0000 Electrical Engineer: (000) 000-0000 General Contractor: (000) 000-0000 Commissioning Authority: (000) 000-0000 Professional Title: (000) 000-0000 Professional Title: (000) 000-0000 Professional Title: (000) 000-0000

Instructions

1. Use the "Worksheet" to indicate the green building measures implemented.
2. An X will be automatically marked in the green boxes below when the corresponding measure on the Worksheet is implemented.

The Rating Report documents the green building measures implemented and assigns a Star Rating.

It is directly linked to the Worksheet and Calculators.

Basic Requirements

A building must fulfill all 8 items on this page to qualify for a Rating.

An X in the green box indicates implementation of the measure.

1. Building Systems Commissioning

A commissioning agent with documented commissioning experience on at least two other building projects, will verify and ensure that mechanical and electrical systems are installed, and calibrated to operate according to the design intent and the owner's operational needs. The following commissioning activities will be completed:

- Develop owner project requirements (OPR) and basis of design (BOD) documentation.
- Include commissioning requirements in the construction documents.
- Develop and utilize a commissioning plan.
- Verify installation, functional performance, training, and documentation.
- Complete a commissioning report.

2. Storm Water Run-off & Water Quality Control - Reduce impact of stormwater run-off on environment.

Meet current city drainage and water quality standards and ordinances for the project site watershed.

3. Roofing to Reduce Heat Island - Reduce heat island effects to minimize the impact on microclimate and human wildlife habitat.

Meet current City of Austin Energy Code roofing requirements with vegetated or reflective roofs.

4. Building Energy Use Efficiency - Reduce consumption and demand to lessen impact on the utility infrastructure and environment.

Exceed current City of Austin Energy Code building envelope and interior lighting requirements by 15% each or exceed current code building by 15% using the ASHRAE/IESNA 90.1-2004 Appendix G Building Performance Rating Method.

5. Building Water Use Reduction - Reduce consumption to lessen impact on water and electric utilities and environment.

Reduce planned indoor potable water consumption below the baseline (ANSI/ASME Standard and City Ordinance) by 10%.

6. Low VOC Interior Paints and Coatings - Reduce amount of toxic pollutants released into the environment.

All paints, primers, and anti-corrosive coatings applied on-site to the building interior must not exceed the VOC limit of Green Seal Standard GS-11; all coatings applied on-site to the building interior must not exceed the current VOC limit of South Coast Air Quality Management District (SCAQMD) Rule 1113.

7. Storage and Collection of Recyclables - Reduce landfill waste generation. Save energy and resources through recycling.

Provide an easily accessible area, that serves the entire facility, dedicated to the separation, collection, and storage of materials for recycling including, at a minimum, the top two (4 for multi-family > 100 units) identified recyclable waste stream items. Building loading dock or pick-up location must be sized appropriately to handle the recycling material volumes generated by the building occupants.

8. Construction Waste Management - Reduce landfill waste generation. Save energy and resources through recycling.

Recycle and/or salvage at least 50% (by weight) non-hazardous construction and demolition waste excluding excavated soil and stone.



BASIC REQUIREMENTS NOT ACHIEVED.

Voluntary Measures

TEAM: Integrating the Design Team, Setting and Achieving Sustainability Goals

- 1 pt. ☐ 0
- 1. Integrated Project Design Team and Sustainable Goals** - Best approach to achieving a sustainable building.
- ☐ Choose design team professionals and consultants early in design phase who are experienced in sustainable design.
 - ☐ Establish and document sustainability goals.
 - ☐ Throughout the Programming, Schematic Design, DD & CD, and Construction phases, hold sustainability meetings with entire project team to restate project goals and design intent, track the progress toward meeting the project's goals and obtaining a Green Building Program Star Rating.
 - ☐ Specifications clearly explain the sustainability goals of the project.
 - ☐ Incorporate the green elements of the project and proposed certification into the pre-construction meeting with all subcontractors who will be affected by them, include, at a minimum, project goals and design intent.

0 Total Team Points

SITE: Sustainability through Site Selection

- 2 pts. ☐ 0
- 1. Site Selection** - Avoid development of environmentally sensitive sites and reduce the environmental impact from the location of the building structures on the site.
- a. **Environmental Sensitivity**
- ☐ Project site is not located in the Drinking Water Protected Zone. Also, project site is not a greenfield.
- 4 pts. ☐ 0
- b. **Desired Development Area**
- ☐ Project site is located within the Urban Watershed Desired Development Zone.
- 1 pt. ☐ 0
- 2. Diverse, Walkable Communities**
- ☐ Building(s) connects with neighboring properties with pedestrian and/or bicycle only paths (shading is preferred) that are separate from vehicular traffic. Project includes or is located within 1/2 mile walking distance of residences and at least 10 Basic Services which are accessible via a safe route explicitly intended for use by the pedestrian; that does not require crossing a road more than 5 lanes wide or 35 miles per hour.
- 1 pt. ☐ 0
- 3. Brownfield Redevelopment** - Rehabilitate sites where development is complicated by environmental contamination.
- ☐ Project demonstrates effective remediation of site contamination using established technologies that have minimal disruption on the site's natural features above and below ground.
- 1 pt. ☐ 0
- 4. Site Characteristics Study** - Reduce the impact of the structures to the environment and optimize building placement on a site.
- ☐ Evaluate and document the site's environmental characteristics. Document existing water elements, soil conditions, ecosystems and natural habitats, trees and other vegetation, and seasonal wind and daylight availability; and map all potential hazards including traffic and pollution sources. Create plan to maintain or restore existing site features. Site building to minimize impact and to utilize natural characteristics.
- 1 pt. ☐ 0
- 5. Transportation Alternatives** - Reduce pollution and development impact from automobile use.
- a. **Public Transportation**
- ☐ Building is located within 1/4 mile of at least 2 Capital Metro bus stops or within 1/2 mile of a rail stop (or future rail stop with proposed completion within 5 years).
- 1 pt. ☐ 0
- b. **Bicycle Use**
- ☐ Incorporate bicycle securing areas and shower / changing facilities that accommodate 10% or more of the building occupants. Provide one bicycle parking space for each rider and one shower for every 8 riders and temporary use lockers. Provide safe bicycle routing on property.
- 1 pt. ☐ 0
- c. **Parking Capacity**
- ☐ Parking does not exceed minimum local zoning requirements and provides preferred parking for carpools for at least 5% of building occupants.
- 1 pt. ☐ 0
- 6. Site Development** - Limit site disturbance or restore damaged open areas to provide habitat and promote biodiversity.
- a. **Protect or Restore Open Areas**
- ☐ On greenfield sites plan to limit disturbance to 40 ft beyond the building perimeter; 10 ft beyond walkways, patios, and surface parking; 15 ft beyond roadways and utility trenches; and 25 ft beyond any pervious areas that require additional staging. On previously developed sites, at least 50% of the post-development open area (site minus building footprint) is vegetated using native/adapted plants. Vegetated roof areas may be included in the open area calculations, if the plants meet the definition of native/adapted.
- 1 pt. ☐ 0
- b. **Maximize Vegetated Open Area**
- ☐ Provide vegetated open area using native/adapted plants equal to 20% of the project site area. Vegetated roof areas may be included in the vegetated open area calculations, if the plants meet the definition of native/adapted.

SITE Cont'd: Sustainability through Site Selection

- 7. Additional Heat Island Reduction** - Reduce heat island effects to minimize the formation of ground-level ozone or smog.
- 1 pt. ☐ **a. Site**
☐ 50% of site hardscape any combination of: planted or vegetative open-grid pavement system, paving materials with SRI 29 minimum, or vegetative shading planted over at least 30% of the non-roof impervious surfaces within 5 years.
- 1 pt. ☐ **OR**
☐ A minimum of 50% of the parking spaces located underground or in structured parking with a top deck surface SRI 29 minimum.
- 1 pt. ☐ **b. Roofing**
☐ Any combination of vegetated and high albedo Roof with a solar reflectance $\geq 75\%$ or SRI ≥ 85 for Roofs $< 2:12$ pitch and solar reflectance $\geq 45\%$ or SRI ≥ 35 for Roofs $\geq 2:12$ pitch.
- 1 pt. ☐ **8. Light Pollution Reduction** - Minimize light trespass from the building and site, improve night sky access and reduce development impact on nocturnal environments.
☐ Exterior lighting meets COA Code-Chpt.25-2, E, Art. 2.5; IESNA RP-33 Light Trespass; and Illuminance levels at specific facilities including parking lots, entry areas near buildings, fueling stations, and sales lots.
- 1 pt. ☐ **9. Integrated Pest Management** - Preserve the site's ecological integrity, enhance biological diversity, and protect wildlife by employing least toxic grounds management practices while supporting building performance and integration into surrounding landscapes.
☐ Implement an Integrated Pest Management Plan and practices.
- 1 pt. ☐ **10. Outdoor Environmental Quality - Outdoor Spaces** - Provide outdoor places on site to enable building occupants and visitors to connect to and enjoy the natural environment.
☐ Shaded seating for 10% or more of the building's occupants.

0 Total Site Points

ENERGY: Save Energy, Use Clean Energy

- 12 pts. ☐ **1. Additional Energy Use Efficiency** - Reduce environmental impacts associated with excessive energy use.
 Energy model using ASHRAE 90.1-2004 Appendix G Performance Rating Method shows building performs:
☐ at least 17.5% better than City of Austin Energy Code. 17.5% = 1 pt, 20% = 2 pts, 22.5% = 3 pts, 25% = 4 pts, 27.5% = 5 pts, 30% = 6 pts, 32.5% = 7 pts, 35% = 8 pts, 37.5% = 9 pts, 40% = 10 pts, 42.5% = 11 pts, 45% = 12 pts.
- 1 pt. ☐ **2. Green Energy** - Support growth of renewable power generation. Reduce environmental impacts of electricity use.
☐ GreenChoice® commercial agreement. If GreenChoice® is unavailable, 2-year contract for Texas or Green-e certified National RECs for 100% of building's annual electricity use.
- 2 pts. ☐ **3. Renewables** - Support distributed power generation through renewable energy. Install on-site renewable energy system for:
 1 pt. ☐ 2% of energy needs.
 1 pt. ☐ 5% of energy needs.
- 1 pt. ☐ **4. Additional Commissioning** - Ensure building and systems performance.
 In addition to BR 1. Building Systems Commissioning pre-requisite the following must be completed:
☐ Commissioning agent shall at a minimum conduct design document review prior to 50% CD's.
☐ Demonstrate that all building systems operate according to Owner Project Requirements narrative.
☐ Demonstrate building structure and envelope perform according to OPR narrative.
☐ Provide seasonal re-commissioning through warranty period.
☐ Complete a commissioning report.
- 1 pt. ☐ **5. District Cooling** - Utilize district cooling plant to reduce power utility load and environmental impacts.
☐ Tie into an Austin Energy district cooling loop.

0 Total Energy Points

WATER: Better Water Quality, Water Conservation, Rainwater Catchment

- 3 pts. ☐ **1. Irrigation Water Reduction** - Reducing the use of potable water for landscape irrigation purposes reduces the load on municipal water systems, saving water and energy.
 Irrigation potable water consumption is reduced by at least:
 1 pt. ☐ 50%
 1 pt. ☐ 75%
 1 pt. ☐ 100%
- 4 pts. ☐ **2. Indoor Potable Water Use Reduction** - Reduce load on municipal water systems saving water and energy.
 Indoor potable water use is reduced by at least:
 1 pt. ☐ 15%
 1 pt. ☐ 20%
 1 pt. ☐ 25%
 1 pt. ☐ 30%
- 1 pt. ☐ **3. Stormwater Management** - Limit the disruption of natural water flows by reducing stormwater runoff, increasing on-site infiltration and eliminating contaminants.
Rate and Quantity
☐ Manage by infiltration 25% of the water quality volume (WQV), as defined by the calculation in the City of Austin Environmental Criteria Manual, for sites $\geq 50\%$ existing impervious cover (IC) or 50% of the WQV for sites $< 50\%$ existing IC.

0 Total Water Points

Indoor Environmental Quality: Better Indoor Environmental Quality, Humidity Control, Comfort	
1 pt.	<div>0</div> <p>1. Indoor Air Quality Monitoring - Maintain adequate volume of fresh air for health and productivity of occupants.</p> <p>Install permanent carbon dioxide monitoring system that provides feedback in a usable form to make adjustments to ventilation system. Commission all systems to the preferred set point parameters and optimal performance for all operating conditions.</p>
1 pt.	<div>0</div> <p>2. Indoor Chemical & Pollutant Sources - Minimize contamination of indoor pollutants for the health and performance of occupants. For areas of identified point source pollution, including copy rooms and print shops, copy machines, laboratories, and janitorial chemical storage rooms:</p> <p>Provide ventilation directly to the outside of the building.</p> <p>Construct a structural deck-to-deck partition (or hard lid enclosure) between these areas and occupied spaces.</p> <p>Operate at negative pressure relative to surrounding areas under all operating conditions by testing.</p>
1 pt.	<div>0</div> <p>3. Daylighting</p> <p>Provide adequate daylighting which minimize glare and integrate daylighting systems, electric lighting systems, and controls to optimize daylighting strategies and minimize energy consumption and heat generation.</p>
1 pt.	<div>0</div> <p>4. Views to the Outside</p> <p>Glazing systems and interior partitions allow for a minimum of 75% of regularly occupied spaces a view of vision glazing (between 2'-6" and 7'-6" from finished floor height) and a view of the outdoors.</p>
1 pt.	<div>0</div> <p>5. Thermal Comfort</p> <p>Install mechanical systems (thermal, ventilation, and dehumidification) and controls to provide thermal comfort for all operating conditions according to ASHRAE 55-2004.</p>
1 pt.	<div>0</div> <p>6. Individual Controllability</p> <p>Install and commission systems for individual occupant controllability for visual and thermal comfort for 75% of the occupants.</p>
1 pt.	<div>0</div> <p>7. Low-Emitting Materials - To reduce the quantity of indoor air contaminants that are odorous or potentially irritating to installer and occupant health and comfort.</p>
1 pt.	<div>0</div> <p>a. Sealants & Adhesives</p> <p>All sealants and adhesives applied on-site to building interior meet South Coast Air Quality Management District (SCAQMD) Rule 1168.</p>
1 pt.	<div>0</div> <p>b. Flooring Systems</p> <p>All installed carpets meet Carpet & Rug Institute's (CRI) Green Label Plus minimum standard; all carpet pads meet CRI Green Label minimum standard. All resilient flooring products, including linoleum, laminate, and rubber are FloorScore certified. All engineered wood and laminate flooring contain no added urea-formaldehyde. All flooring systems meet SCAQMD Rule 1113 and 1168.</p>
1 pt.	<div>0</div> <p>c. Composite Wood & Agrifiber Products</p> <p>All installed composite wood and agrifiber products contain no added urea-formaldehyde.</p>
1 pt.	<div>0</div> <p>d. Insulation</p> <p>All installed insulation (excluding piping) contains no added urea-formaldehyde.</p>
1 pt.	<div>0</div> <p>8. Moisture Prevention - Maintain building integrity and durability and a healthy environment for occupants.</p> <p>No vinyl wallcoverings or other vapor barrier may be installed as the finish material on the interior of any exterior wall. Include in tenant agreements.</p> <p>Ensure proper installation of building envelope drainage plane systems, including flashing and overhang systems.</p> <p>Ensure building will be pressurized.</p>
1 pt.	<div>0</div> <p>9. Acoustic Quality - Prevent noise infiltration for the comfort and productivity of the occupants.</p> <p>Define appropriate background sound levels, reverberation decay times, speech intelligibility, and sound isolation for the building use. Identify spaces where impact noises are likely and address the potential problem.</p> <p>Mechanical and duct systems designed to meet guideline RC, NC or NCB provided by current copy of ASHRAE Applications Design Guidelines for HVAC Sound and Vibration Control Chapter.</p> <p>Provide appropriate vibration isolation for mounted equipment.</p> <p>Select equipment that could not be characterized as "tonal".</p> <p>Specify surface finishes and/or masking systems to provide appropriate sound intelligibility and privacy.</p> <p>Specify partitions, ceilings, floor/ceiling assemblies, building layouts, and vestibules to provide adequate sound isolation between spaces.</p> <p>Mitigate intermittent noise sources such as footfall and loading dock noise.</p>
1 pt.	<div>0</div> <p>10. Outdoor Pollutant Sources - Prevent infiltration of outdoor pollutants for the health of occupants.</p> <p>Entrances, operable windows and fresh air intakes shall be located a minimum 30 feet away from designated smoking areas and air intakes shall meet the minimum separation distance requirements of ASHRAE STD. 62.1-2004, Table 5-1. Install appropriate signage to clearly designate where smoking is permitted and not permitted.</p> <p>Install permanent entryway systems at least 6 feet long (10 feet recommended).</p> <p>Mitigate air borne contaminants from outdoor air pollutant sources.</p>
1 pt.	<div>0</div> <p>11. Construction Indoor Air Quality - Prevent indoor air quality problems that result from the construction process.</p> <p>Implement a Construction Indoor Air Quality Management Plan that meets or exceeds the Sheet Metal and Air Conditioning National Contractor's Association (SMACNA) Guidelines for Occupied Buildings Under Construction. The plan should include each of these key areas of IAQ protection: Scheduling, Source Control, HVAC Protection, Pathway Interruption, and Housekeeping. Protect stored on-site or installed absorptive materials from moisture damage. If permanently installed air handlers are used during construction, filtration media with a minimum MERV of 8 shall be used at each return grille. Replace all media filters immediately prior to occupancy.</p>
<div>0</div> <p>Total Indoor Environmental Quality Points</p>	

MATERIALS & RESOURCES: Sustainable Material Choices, Use and Disposal	
1 pt.	<input type="checkbox"/> 0 1. Additional Construction Waste Management - Recycle and/or salvage at least 75% by weight of construction and demolition waste excluding excavated soil and stone. <input type="checkbox"/> 75% (by weight) diverted from landfill.
2 pts.	<input type="checkbox"/> 0 2. Building Reuse - Extend the life cycle of existing building stock, conserve resources, retain cultural resources, reduce waste, and reduce environmental impacts of new buildings as they relate to materials manufacturing and transport.
1 pt.	<input type="checkbox"/> 0 a. Building Envelope and Structure <input type="checkbox"/> Incorporate at least 40% (surface area) of existing building envelope and structure in the new building.
1 pt.	<input type="checkbox"/> 0 b. Interior Non-structural Elements <input type="checkbox"/> Incorporate at least 50% (surface area) of existing interior non-structural elements in the new building.
2 pts.	<input type="checkbox"/> 0 3. Salvaged Materials - Extend the life cycle of targeted building materials by reducing environmental impacts related to materials manufacturing and transport. Salvaged or refurbished materials account for:
1 pt.	<input type="checkbox"/> 5% (dollar value) of project building materials.
1 pt.	<input type="checkbox"/> 10% (dollar value) of project building materials.
2 pts.	<input type="checkbox"/> 0 4. Recycled Content - Increase demand for building products that have incorporated recycled content materials, therefore reducing the impacts resulting from the extraction of new materials. Building materials contain recycled content (the sum of post-consumer recycled content plus one-half of the pre-consumer content) of at least:
1 pt.	<input type="checkbox"/> 10% (dollar value) of the materials in the project.
1 pt.	<input type="checkbox"/> 20% (dollar value) of the materials in the project.
2 pts.	<input type="checkbox"/> 0 5. Texas Sourced Material - Increase demand for materials that are manufactured locally, thereby reducing the environmental impacts resulting from their transportation and supporting the local economy. Building materials and products are extracted and/or manufactured (final assembly) regionally within Texas for at least:
1 pt.	<input type="checkbox"/> 30% (dollar value) of the project building materials.
1 pt.	<input type="checkbox"/> 50% (dollar value) of the project building materials.
1 pt.	<input type="checkbox"/> 0 6. Certified Wood - Encourage environmentally responsible forest management. <input type="checkbox"/> At least 50% (dollar value) of wood-based materials are certified in accordance with the Forest Stewardship Council (FSC) guidelines for wood building components.
1 pt.	<input type="checkbox"/> 0 7. Low VOC Paints, Coatings, Adhesives, and Sealants - To reduce the quantity of air contaminants that are odorous or potentially irritating to installer health and comfort. <input type="checkbox"/> All paints, primers, and anti-corrosive coatings applied on-site to the building exterior must not exceed Green Seal standard GS-11 and all exterior coatings, adhesives, and sealants applied on-site must not exceed the current VOC limits of South Coast Air Quality Management District (SCAQMD) Rule 1113 and Rule 1168.
0 Total Materials & Resources Points	
EDUCATION: Environmental Awareness and Contribution	
1 pt.	<input type="checkbox"/> 0 1. Educational Outreach <input type="checkbox"/> Provide at least 2 educational services to include comprehensive signage, case study, and/or educational outreach (ex. guided tours).
0 Total Education Points	
INNOVATION: Creative, New Sustainable Solutions	
1 pt.	<input type="checkbox"/> 0 <input type="checkbox"/> 1
1 pt.	<input type="checkbox"/> 0 <input type="checkbox"/> 2
1 pt.	<input type="checkbox"/> 0 <input type="checkbox"/> 3
1 pt.	<input type="checkbox"/> 0 <input type="checkbox"/> 4
1 pt.	<input type="checkbox"/> 0 <input type="checkbox"/> 5
0 Total Innovation Points	



Date: May 7, 2009 (Revised September 15, 2009)
To: Stephen Rye, Case Manager
CC: Kathy Hornaday, P.E., HDR/WHM Transportation Engineering, Inc.
Reference: South Shore PUD TIA, C814-2008-0087

The Transportation Review Section has reviewed the Traffic Impact Analysis (TIA) for the South Shore PUD, dated December 19, 2008, prepared by HDR/WHM Transportation, and offers the following comments:

The South Shore PUD TIA covers a total of 20.17 acres. The site is located in southeast Austin and is bound by E Riverside Drive, Lakeshore Drive and Tinnin Ford Road.

The property is currently zoned Multi-Family Residential (MF-3), Multi-Family Residential – Neighborhood Plan (MF-3-NP), and Community Commercial – Neighborhood Plan (GR-NP). Currently 527 apartment units exist on the property. The applicant has requested a zoning change to Planned Unit Development (PUD) and proposes to redevelop the site with 1,380 apartment units, 87,000 ft² of retail, and 10,000 ft² of high turnover restaurant. The estimated completion of the project is expected in the year 2012.

TRIP GENERATION

Based on the standard trip generation rates established by the Institute of Transportation Engineers (ITE), the development will generate approximately 12,601 new unadjusted average daily trips (ADT).

The table below shows the adjusted trip generation by land use for the proposed development:

Table 1. Trip Generation						
			AM Peak		PM Peak	
LAND USE	Size	ADT	Enter	Exit	Enter	Exit
Apartments	1,380 DU	7,372	119	475	441	237
Retail	87,000 SF	3,845	58	37	158	171
High Turnover Restaurant	10,000 SF	688	35	32	33	21
Total		11,905	212	544	632	429

ASSUMPTIONS

1. Based on traffic volumes collected from TxDOT, a two percent annual growth rate was applied to all roadways within the study area.
2. In addition to these growth rates, background traffic volumes for 2012 included estimated traffic volumes for the following projects:

• Libertad Bank	SP-05-1381C
• 2237 E Riverside	SP-04-0018C
• AutoZone #3069	SP-04-0185C
• Storage USA	SP-02-0174F
• El Gran Mercado	SP-00-2475C
• Jefferson Commons at Town Lake	SP-02-0194C
• Colorado River Park	SPC-04-0021C
• HEB Austin #12	SP-05-1260C
• Riverside Plaza	C8-06-0022.0A
• Lakeshore Waterfront	C14-04-0129
• Lakeshore Blvd	C814-06-0109

3. Reductions were taken for pass-by for the following uses:

Table 3. Summary of Pass-By and Internal Capture Reductions		
Pass-By Reductions %		
Land Use	AM	PM
Shopping Center	24%	34%
Hi-Turnover Restaurant	33%	43%
Internal Capture Reductions %		
Land Use	AM	PM
All Land Uses	3%	3%

4. A ten percent transit reduction was assumed for all land uses during both the AM and PM peak periods based on the 27 bus stops in the vicinity of the study area.

EXISTING AND PLANNED ROADWAYS

IH 35 – The AMATP classifies IH 35 as a six-lane freeway between Cesar Chavez Street and US 290 (W). According to TxDOT traffic counts, the 2006 traffic volume on IH 35, north of Riverside Drive, was approximately 153,000 vehicles per day (vpd). According to the AMATP, IH 35 is committed to be upgraded to an eight-lane freeway with High Occupancy Vehicle (HOV) lanes, between Cesar Chavez Street and US 290 (W) by 2025.

Riverside Drive – The AMATP classifies Riverside Drive as a six-lane divided major arterial between IH 35 (S) and SH 71 (E). City of Austin traffic counts indicate that the 2005 traffic volume on Riverside Drive, west of Willow Creek Drive was approximately 47,000 vpd. Per the AMATP, Riverside Drive is committed to be upgraded to an eight-lane divided major arterial between IH 35 (S) and SH 71 (E) by 2025. An additional 60 feet of Right of Way (ROW) is recommended between IH 35 (S) and Lakeshore Drive. The City is currently conducting a corridor study for Riverside Drive. The study, East Riverside Drive Corridor Plan, will include transportation recommendations along Riverside Drive to create an improved vehicular, pedestrian, and transit supportive roadway. The Austin Bicycle Plan recommends Priority 1 Route 60 from IH 35 (S) and SH 71 (E).

Lakeshore Boulevard – The AMATP classifies Lakeshore Boulevard as a two-lane minor arterial between Riverside Drive and Pleasant Valley Road. Lakeshore Boulevard transitions into a four-lane roadway at its intersection with Riverside Drive. City of Austin traffic counts indicate that the 2006 traffic volume on Lakeshore Boulevard, west of Tinnin Ford Dr. was approximately 11,700 vpd. According to the AMATP, Lakeshore Boulevard is committed to be upgraded to a four-lane minor

arterial between Riverside Drive and Pleasant Valley Road. The Austin Bicycle Plan recommends Priority 1 Route 62 from Riverside Drive to Pleasant Valley Road.

Pleasant Valley Road – The AMATP classifies this roadway as a four-lane undivided major arterial from Colorado River to Riverside Drive. City of Austin traffic counts indicate that the 2005 traffic volume on Pleasant Valley Road, north of Riverside Drive was approximately 19,600 vpd. Per the AMATP, Pleasant Valley Road is committed to be upgraded to a four-lane divided major arterial, between Colorado River and Riverside Drive. The Austin Bicycle Plan recommends Priority 1 Route 61 from Lakeshore Boulevard to Riverside Drive.

Arena Drive/Parker Lane – Arena Drive is currently a two-lane undivided roadway in the vicinity of the site. Arena Drive transitions into a four-lane roadway at its intersection with Riverside Drive. As part of the development, Arena Drive is proposed to be extended (to the east) to intersect Tinnin Ford Road, and is proposed to align with a Lakeshore PUD site driveway. The Austin Bicycle Plan recommends Priority 1 Route 59 on Arena Drive from Town Creek Drive to Riverside Drive. Parker Lane is currently a four-lane undivided roadway in the vicinity of the site. The Austin Bicycle Plan recommends Priority 1 Route 59 on Parker Lane from Riverside Drive to Woodland Avenue.

Royal Crest Drive – Royal Crest Drive is currently a two-lane undivided roadway in the vicinity of the site. No improvements are currently planned for this roadway in the vicinity of the site.

Town Creek Drive – Town Creek Drive is currently a two-lane undivided roadway in the vicinity of the site. The Austin Bicycle Plan recommends Priority 1 Route 59 from Lakeshore Boulevard to Arena Drive.

Tinnin Ford Road/Burton Drive – Tinnin Ford Road is currently a two-lane undivided roadway in the vicinity of the site. No improvements are currently planned for this roadway. Burton Drive is currently a two-lane undivided roadway in the vicinity of the site. No improvements are currently planned for this roadway in the vicinity of the site.

Willow Creek Drive – Willow Creek Drive is currently a two-lane undivided roadway in the vicinity of the site. Willow Creek Drive transitions into a three-lane roadway at its intersection with Riverside Drive. No improvements are currently planned for this roadway in the vicinity of the site. The Austin Bicycle Plan recommends Priority 1 Route 68 from Woodland Avenue to Oltorf Street.

Wickersham Lane – Wickersham Lane is currently a four-lane undivided roadway in the vicinity of the site. Wickersham Lane transitions into a five-lane roadway at its intersection with Riverside Drive. City of Austin traffic counts indicate that the 2004 traffic volume on Wickersham Lane, north of Cromwell Circle was approximately 9,000 vpd. No improvements are currently planned for this roadway in the vicinity of the site.

Elmont Drive – Elmont Drive is currently a two-lane undivided roadway in the vicinity of the site. Elmont Drive is proposed to be reconfigured to provide a 90 degree “T” intersection with Tinnin Ford Road as part of the Lakeshore PUD development. Further improvements are recommended for this roadway as part of the South Shore District PUD development.

INTERSECTION LEVEL OF SERVICE (LOS)

The TIA analyzed 24 intersections, of which 8 are or will be signalized. Existing and projected levels of service are as follows, assuming that all improvements recommended in the TIA are built:

Intersection	2008 Existing		2012 Forecasted		2012 Site + Forecasted	
	AM	PM	AM	PM	AM	PM
IH 35 and Riverside Drive*	F	F	F	F	F	F
Riverside Drive and Lakeshore Boulevard*	B	C	C	D	C	D
Riverside Drive and Arena Drive/Parker Lane*	B	C	C	C	D	C
Riverside Drive and Royal Crest Drive*	A	C	A	B	A	B
Riverside Drive and Tinnin Ford Drive/Burton Drive*	E	C	F	D	F	D
Riverside Drive and Willow Creek Drive*	B	C	B	D	B	D
Riverside Drive and Pleasant Valley Road *	D	D	D	E	D	D
Riverside Drive and Wickersham Lane *	C	C	C	C	C	C
Lakeshore Boulevard and Town Creek Drive	A	A	A	A	A	A
Town Creek Drive and Arena Drive	A	A	A	A	A	B
Riverside Drive and Private Driveway/Town Creek Drive	A	A	A	A	A	A
Lakeshore Boulevard and Tinnin Ford Road	A	A	A	E	B	A
Tinnin Ford Road and Elmont Drive	A	A	D	A	B	A
Tinnin Ford Road and Arena Drive/Private Driveway	-	-	-	-	A	A
Lakeshore Boulevard Driveway A	-	-	-	-	A	A
Lakeshore Boulevard and Driveway B	-	-	-	-	A	A
Lakeshore Boulevard and Driveway C	-	-	-	-	A	A
Arena Drive and Driveway D	-	-	-	-	A	A
Arena Drive and Driveway E/Driveway G	-	-	-	-	A	A
Arena Drive and Driveway F	-	-	-	-	A	A
Town Creek Drive and Driveway H	-	-	-	-	A	A
Town Creek Drive and Driveway I	-	-	-	-	A	A
Tinnin Ford Road and Driveway J	-	-	-	-	A	A
Tinnin Ford Road and Driveway K	-	-	-	-	A	A
Town Creek Drive and Driveway L/Driveway M	-	-	-	-	A	A
Driveway N and Riverside Drive	-	-	-	-	A	A

*SIGNALIZED

RECOMMENDATIONS

1) Prior to City Council approval, fiscal is required to be posted for the following improvements:

Intersection	Improvements	Total Cost	Pro-Rata Share %	Pro-Rata Share \$
IH 35 & Riverside Dr.	Construct NB Right turn lane	\$355,486	6.0%	\$21,329
	Construct NB Through lane	\$50,705	6.0%	\$3,042
	Optimization of Signal Timing	\$5,000	6.0%	\$300
Riverside Dr & Lakeshore Blvd.	Extend EB left turn lane	\$45,725	17.4%	\$7,956
	Optimization of Signal Timing	\$5,000	9.6%	\$480
Riverside Dr. & Tinnin Ford Rd/Burton Dr.	Extend SB right turn lane	\$8,948	13.7%	\$1,226
	Optimization of Signal Timing	\$5,000	4.5%	\$225
Riverside Dr. & Willow Creek	Construct WB left turn lane	\$85,229	4.3%	\$3,665
Riverside Dr. & Pleasant Valley Rd.	Optimization of Signal Timing	\$5,000	2.7%	\$135
Lakeshore Blvd. & Tinnin Ford Rd.	Striping of a WB left turn lane	\$11,101	6.4%	\$710
	Installation of a Traffic Signal	\$112,500	6.4%	\$7,200
Tinnin Ford Rd.	Restripe for two-way center left turn lane w/ left turn bays from S Lakeshore to E Riverside	\$17,968	14.3%	\$2,569
Lakeshore Blvd.	Restripe for bike lane, south side of street, from west site boundary to Tinnin Ford	\$27,103	19.2%	\$5,204
Town Creek Dr.	Restripe for bike lane, from Arena Dr to E Riverside	\$16,287	16.3%	\$2,655
	Sub Total	\$751,051		\$56,697

Fiscal estimates provided/sealed by Kathleen Hornaday, P.E. on February 13, 2009.

2) Several revisions have been made to the bicycle facilities that will be provided within and in the vicinity of this site. These additional improvements were agreed to by the Developer after several meetings with the City of Austin staff and the bicycle community. In addition to posting the required fiscal for the above improvements, fiscal is also being posted prior to Council approval for the following:

Intersection	Improvements	Total Cost	Pro-Rata Share %	Pro-Rata Share \$
Lakeshore Blvd.	Restripe for bike lane, from E Riverside to Tinnin Ford,	\$43,365	19.2%	\$8,326

	outside property boundary			
Tinnin Ford Rd.	Stripe for bike lane, from E Riverside to S Lakeshore	\$27,525	14.3%	\$3,936
Town Creek Dr.	Stripe for bike lane, from S Lakeshore to E Riverside, outside of property boundary	\$33,614	16.3%	\$5,479
	Sub Total	\$104,504		\$17,741
	Total Cost	\$715,392		\$74,438

- 3) Assumed in the TIA is the reconstruction of Arena Drive between Riverside Dr and Tinnin Ford Rd to accommodate two 12-foot travel lanes and a six (6) foot bike lane and an eight (8) foot parking lane along each side of the road. The bike lanes will be striped as per City of Austin standards. This improvement will be funded in total by the applicant. Arena Drive will be extended past Town Creek Dr to Tinnin Ford Rd as a private drive. At the time of subdivision or site plan signed and sealed construction plans and cost estimates will be required for staff review and approval.
- 4) All site drives shall be constructed as recommended per the TIA.
- 5) Development of this property should be limited to uses and intensities which will not exceed or vary from the projected traffic conditions assumed in the TIA, including peak hour trip generations, traffic distribution, roadway conditions, and other traffic related characteristics.

If you have any questions or require additional information, please contact me at 974-3428.



Amber Mitchell
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Watershed Protection and Development Review